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Next Spring Likely To Be Easier For Lake Ontario Boaters, Property Owners

Property owners and boaters on Lake Ontario can probably look forward to a spring of much lower water levels than those experienced in the spring of 1993.

"With Lake Ontario just below its average level, a repeat of 1993's near-record spring levels is unlikely -- assuming we don't see a winter like last year's," says Ralph Moulton, manager of Environment Canada's Great Lakes Water Level Communications Centre.

A year ago this month, Lake Ontario's level had reached 20 centimetres above its long-term average. In the succeeding months, the level rose rapidly due to record high water supplies, high inflows from Lake Erie and ice jams in the St. Lawrence River. These jams restricted Lake Ontario's outflows at times and caused flooding on parts of the St. Lawrence River.

"Conditions on the lake next spring really depend on the weather through the winter and into the spring months. Unfortunately, we cannot accurately predict the weather that far into the future." However, forecasting based upon the most probable water supplies indicates that with the current near-average lake level and assuming the extreme conditions of last winter and spring do not recur, Lake Ontario's level should be between 10 and 20 cm above its long-term average level by next April.

Lake Superior, the other Great Lake which has regulated outflows, began November at 5 cm above its average for the time of year. Levels on the middle lakes remained above their seasonal averages by 26 cm on Lake Huron, 30 cm on Lake St. Clair and 29 cm on Lake Erie.

Assuming the most probable water supplies, levels of the Great Lakes are forecast to continue their seasonal declines over the next several weeks. Lakes Superior and Ontario are expected to remain close to average, while Lakes Huron, St. Clair and Erie are likely to remain above average.

If water supplies are significantly higher or lower than average, lake levels could rise above or fall below those forecast.

Niagara River Closely Monitored

Two Treaties Govern Use Of River's Water

The legendary Niagara River has played an important role in the histories of both Canada and the United States. With the border between the two countries running almost through its centre, the river and its famous Niagara Falls are not only objects of great interest in both countries, they are a resource to be shared.

Two treaties govern the way the river's water is used. They are the Boundary Waters Treaty of 1909 and the Niagara Treaty of 1950.

The Boundary Waters Treaty led to the formation of the International Joint Commission, which oversees boundary waters issues. In addition to overseeing regulation of Lakes Superior and Ontario, the Commission also bears responsibilities with respect to matters affecting the levels and flows of the Niagara River.

With the further development of hydroelectric generation, the Commission established an International Niagara Board of Control to ensure that the objectives of the 1950 Treaty were met: 1. to preserve the scenic beauty of Niagara Falls, and 2. to provide the most beneficial use of water for hydropower generation.

The structure that hydro plants use to divert water from the river upstream of Niagara Falls is also used to change the amount of water that actually goes over the Horseshoe Falls in Canada and the American Falls in the United States. The 1950 Treaty specifies the minimum flow over the Falls at certain times. For example, during the daylight hours of the tourist season, flows over the American and Horseshoe Falls must be no less than 2832 cubic metres per second (cms). This requirement protects the scenic beauty of the falls. At all other times, the minimum flow is 1416 cms.

To ensure compliance with the 1950 Treaty, the Canadian and U.S. governments established the International Niagara Committee. This committee continuously monitors Falls flows and river diversions.

The power plants take water out of the river upstream of the Falls, and return it to the river before it empties into Lake Ontario. Unlike regulation structures at the outlets of Lakes Superior and Ontario, the operations at Niagara do not have a measurable effect the amount of water flowing out of Lake Erie. The slope of the river is steep enough that any effects of changes in river levels near the Falls do not extend all the way to the lake's outlet -- at least to the extent that they can be measured.

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